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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/096,515	06/12/1998	YUJI INOUE	35.G2190	1905

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EXAMINER

A, PHI DIEU TRAN

ART UNIT	PAPER NUMBER
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3637

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/096,515

Applicant(s)

INOUE ET AL.

Examiner

Phi D A

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4,6-12 and 121 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4,6-12 and 121 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 4, 6-12, 121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Itoyama et al (5589006) in view of Frihart et al (5786086), Mori (5409549).

Itoyama et al shows a cladding assembly/air flow apparatus comprising a plurality of building materials each of which comprises a substrate (107), a solar cell (101) unit fixed to the substrate, each of the plurality of building materials fixed on a backing material (104) by a fixing member (figure 1b), electrical conductive leads (113) arranged between the building materials and the backing material (figure 1b) for leading output from the solar cell units to the outside, a jacket material on each of the conductive leads, the substrate being composed of metal, the leads having connector provided at the end of each of the leads, a spacer (102) provided between the building materials and the backing material, the plurality of building materials are arranged on the backing material so that the adjacent building materials are electrically connected by the electrical conductive leads (figure 1b), a space between the substrate and the backing material so that outside air flows in the space, passes through the space and is entrapped in a house or discharged to the outdoors (figure 8).

Itoyama et al does not show the electrical conductive leads contacting the backing material, the jacket material being composed of at least one selected from the group consisting of polyethylene resins, polyamide resins, vinylidene fluoride resins, chloroprene rubber, ethylene-

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propylene rubber, silicone resins, and fluoro-resins, the backing material containing any one of asphalt resins, vinyl chloride resins, polystyrene resins, and polyurethane resins, two terminal outlet holes being formed on the substrate, and a terminal outlet box is mounted to cover said two terminal outlet holes, the connector composed of at least one selected from the group consisting of polyethylene resins, polyamide resins, vinylidene fluoride resins, chloroprene rubber, ethylene-propylene rubber, silicone resins, and fluoro-resins.

Frihart et al teaches a conductive wire coating of a polyamide resin composition for insulation and protection of the wire providing highly desirable properties (see abstract).

Applicant's disclosure of the prior art teaches that it is well known for one skill in the art to lengthen the electrical connector causing it to be in contact with the backing material to make connecting the panels easier (page 3 lines 18-25).

Applicant's disclosure of the prior art further teaches that coating conductive leads is widely used (page 4 lines 7-8). The applicant's disclosure of the prior art continues to and teaches that it is well known in the art to use backing material of asphalt, vinyl chloride, polyurethane, or polystyrene (page 4 lines 8-11).

Mori (figure 9) shows a terminal outlet box (44) mounted to the solar cell for leading out a terminal (col 2 lines 10-13).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al to show the jacket material and the connector being composed of at least one selected from the group consisting of polyethylene resins, polyamide resins, vinylidene fluoride resins, chloroprene rubber, ethylene-propylene rubber, silicone resins, and fluoro-resins because to have the jacket and connector material composed of polyamide resins as

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taught by Frihart et al would have been a matter of obvious design choice as it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use, In re Leshin , 125 USPQ 416.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al to show the electrical conductive leads contacting the backing material because it has been disclosed by applicant that it is well known for one skill in the art to lengthen the electrical connector causing it to be in contact with the backing material to make connecting the panels easier (page 3 lines 18-25)

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al to show the backing material containing any one of asphalt resins, vinyl chloride resins, polystyrene resins, and polyurethane resins, two terminal outlet holes being formed on the substrate because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice, In re Leshin, 125 USPQ 416, and the fact the choosing of the material is a matter of engineering design choice is further taught by applicant's disclosure (page 4 lines 8-11).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al to show the two terminal outlet holes being formed on the substrate, and a terminal outlet box is mounted to cover said two terminal outlet holes because using a terminal outlet box as taught by Mori to cover two terminal outlet holes would ensure the proper insulation of the holes from foreign particles and prevent the disconnection of the leads from the solar cell and thus resulting in a better product.

Itoyama et al as modified shows all the claimed limitations.

Per claims 9-11, Itoyama et al as modified shows all the claimed limitations. The claimed method steps of installing a building material would have been the obvious method steps of installing Itoyama et al's modified structures.

Per claim 121, Itoyama et al as modified shows all the claimed limitations except for a terminal outlet box being mounted to cover one said two terminal outlet holes and another terminal outlet box being mounted to cover the other of the two terminal outlet holes.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Itoyama et al's modified structure to show a terminal outlet box being mounted to cover one said two terminal outlet holes and another terminal outlet box being mounted to cover the other of the two terminal outlet holes because examiner takes Office Notice of the equivalence of using one outlet box and two outlet box for their use in electrical outlet covering art and the selection of any of these known equivalents to cover the two terminal outlet holes would be within the level of ordinary skill in the art.

Response to Arguments

3. Applicant's arguments with respect to claims 4, 6-12, 121 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art shows different solar cell panel designs.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phi D A whose telephone number is 703-306-9136. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lanna Mai can be reached on 703-308-2486. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Phi Dieu Tran A

5/25/04